UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,871	03/16/2005	Mark Thomas Johnson	NL 020849	2053

24737 7590 02/13/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
WOOLCOCK, LENWORTH A	
ART UNIT	PAPER NUMBER
4181	
MAIL DATE	DELIVERY MODE
02/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,871	JOHNSON ET AL.	
	Examiner	Art Unit	
	LENWORTH WOOLCOCK	4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/21/2006 & 03/16/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: An organic electroluminescent display device with means for eliminating degradation of image.

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the

field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokunaga et al (EP 1079361 A1).

Consider claims 1 and 12, Tokunaga discloses a method of generating a driving signal (8) for driving a plurality of pixels (2) of an organic electroluminescent display device for displaying an image **(see abstract, and fig 1)**, the device comprising sensors (9; 11; 14) for monitoring operating conditions of the pixels (2) **(see abstract, thermistor)**. The method comprising the steps of: obtaining data from the sensors (9; 11;14) related to the operating conditions **(see abstract, a voltage derived from a node between the resistor and the termistor)**, determining a brightness change of the pixels (2) caused by the operating conditions **(see par [0041]-[0042], the luminance value varying due to the operational conditions)**, and generating a driving signal (8) in dependence on the brightness change **(see par [0042], voltage is adjusted based on the luminance value)**.

Claim Rejections - 35 USC § 103

Claims 2-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokunaga et al (EP 1079361 A1) in view of Cok et al (EP 1158483 A2).

Consider claim 2, Tokunaga discloses sensors (9; 11; 14) comprise at least one temperature sensor (9) for monitoring temperature data relating to the pixels (2) **(see abstract, thermistor monitors temperature relating to pixels),** and said controller adapted to generate said driving signal in dependence on the temperature data **(see abstract, drive signal is modified based on the temperature data)**. Tokunaga does not specifically disclose monitoring means (5) are present for monitoring total charge data of the pixels (2), and said controller (3) is adapted to generate said driving signal (8) in dependence on the total charge data. Cok discloses monitoring means (5) are present for monitoring total charge data of the pixels (2) **(see column 4 lines 22-36 and , where Cok disclose monitoring means for monitoring current and time, which is what is needed to determine charge data)**, and said controller (3) is adapted to generate said driving signal (8) in dependence on the total charge data **(see col 4 lines 41-44, control circuit generates signal depending on performance measured by sensors)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Tokunaga, and teach monitoring means (5) are present for monitoring total charge data of the pixels (2), and said controller (3) is adapted to generate said driving signal (8) in dependence on the total charge data., as taught by Cok, thus optimizing the display, as discussed by Cok **(see par [0001])**.

Consider claim 3, the combination of Tokunaga and Cok discloses the controller is adapted to derive an acceleration factor from the temperature data and to adjust the

driving signal (8) depending on the product of the total charge data and the acceleration factor.

Consider claim 4, the combination of Tokunaga and Cok discloses the temperature sensor (9) comprises at least one reference pixel and temperature determination means adapted to determine a temperature in dependence on at least one temperature-dependent characteristic of the reference pixel **(see Tokunaga abstract and Cok column 4 lines 22-40)**.

Consider claim 5, Tokunaga discloses monitoring means (13) are present, adapted for determining degradation state data of a pixel **(see par [0041]-[0042], the luminance value varying due to the operational conditions)**. Tokunaga does not specifically disclose the sensors (9; 11; 14) comprise at least one reference pixel (11), monitoring means (5) are present for monitoring total charge data of the pixels (2), and further monitoring means (13) are present, adapted for determining degradation state data of said reference pixel (11), said controller (3) being adapted to generate said driving signal (8) taking account of said total charge data and said degradation state data. Cok discloses disclose the sensors (9; 11; 14) comprise at least one reference pixel (11) **(see col 3 lines 35-38)**, monitoring means (5) are present for monitoring total charge data of the pixels (2) **(see column 4 lines 22-36 and , where Cok disclose monitoring means for monitoring current and time, which is what is needed to determine charge data)**, and further monitoring means (13) are present, adapted for determining degradation state data of said reference pixel (11) **(see col 4 lines 13-21, reference pixel is monitored to determine performance)**, said controller (3) being

adapted to generate said driving signal (8) taking account of said total charge data and said degradation state data **(see col 4 lines 41-44, control circuit generates signal depending on performance measured by sensors)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Tokunaga, and disclose the sensors (9; 11; 14) comprise at least one reference pixel (11), monitoring means (5) are present for monitoring total charge data of the pixels (2), and further monitoring means (13) are present, adapted for determining degradation state data of said reference pixel (11), said controller (3) being adapted to generate said driving signal (8) taking account of said total charge data and said degradation state data, as taught by Cok, thus optimizing the display, as discussed by Cok **(see par [0001])**.

Consider claim 7, Cok discloses the pixels (2) comprise at least two sub-pixels of a different type, and at least one reference pixel for each type is present **(see col 4 line 57 – col 5 line 3)**.

Consider claim 8, Cok discloses controller (3) is adapted to provide each reference pixel (11) with a driving signal corresponding to an average brightness level of the respective types **(see col 4 lines 16-17)**.

Consider claim 9, Cok discloses the controller (3) is adapted to ignore at least one of the total charge data and the data from the sensors (9; 11; 14) for at least one sub-pixel **(see col 4 lines 47-51, if voltage reaches a certain level sensor data is ignored)**.

Consider claim 10, Tokunaga discloses the sensors (9; 11; 14) comprise means (14) to sense a relation between a reverse current and a reverse voltage of the pixels (2) for deriving degradation state data for the pixels (2) **(see par [0156] and par [0163]), the voltage and current are both measured and recorded by the microcontroller which in turn provides a means to compared previous data)**, and said controller (3) is adapted to generate said driving signal (8) taking account of said degradation state data **(see par [0163])**.

Consider claim 11, Tokunaga inherently discloses means (14) are adapted to derive said degradation state data when the display device (1) is turned on **(see abstract, data cant be compared with a value from the EL element)**.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tokunaga et al (EP 1079361 A1) in view of Cok et al (EP 1158483 A2) in further view of Lee et al (US 2003/0151569 A1).

Consider claim 6, the combination of Tokunaga and Cok does not specifically teach a photodiode is present to measure the degradation state data of said pixel. Lee discloses a photodiode is present to measure the degradation state data of said pixel **(see par [0016])**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of the combination of Tokunaga and Cok, and have a photodiode is present to measure the degradation state data of said pixel, as taught by

Lee, thus providing the ability to correct for changes due to aging in image display devices, as discussed by Lee **(see par [0010])**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LENWORTH WOOLCOCK whose telephone number is (571)270-5152. The examiner can normally be reached on M-TH 8:30am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lenworth Woolcock/
Examiner, Art Unit 4181

/Nick Corsaro/
Supervisory Patent Examiner, Art Unit 4181